

CERTIFICATE OF TRANSLATION

As a below named translator, I hereby declare that my residence and citizenship are as stated below next to my name and I hereby certify that I am conversant with both the English and Korean languages and the document enclosed herewith is a true English translation of the Priority Document with respect to the Korean patent application No. **10-2002-0056167** filed on **September 16, 2002**.

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Application Number : Korean Patent Application No. 10-2002-0056167

Date of Application : September 16, 2002

Applicant(s) : Samsung Electronics Co., Ltd.

COMMISSIONER

[ABSTRACT OF THE DISCLOSURE]**[ABSTRACT]**

5 Disclosed is a method for transmitting a common schedule message
to a plurality of mobile terminals using a short message service (SMS) in a
mobile terminal having an SMS function and a schedule function, and
enabling a mobile terminal receiving the schedule message to record the
received schedule message therein as a schedule. If a user selects a
10 schedule transmission for transmitting a schedule registered in the mobile
terminal to another mobile terminal, the mobile terminal converts a data
format for the schedule into a data format of a schedule-recordable SMS
message, and then transmits the schedule-recordable SMS message. To
record a schedule, the mobile terminal receiving a schedule message
15 converts a data format of the received SMS message into a format of
schedule-recordable data and records the converted data therein as a
schedule, if schedule recording is selected by the user.

[REPRESENTATIVE FIGURE]

20 FIG. 4

[INDEX]

25 SMS, Schedule, Electronic Diary

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[SPECIFICATION]**[TITLE OF THE INVENTION]**

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METHOD FOR TRANSMITTING AND RECORDING
SCHEDULE USING A SHORT MESSAGE SERVICE

[BRIEF DESCRIPTION OF THE DRAWINGS]

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FIG. 1 is a block diagram of a mobile terminal to which the present invention is applied;

FIG. 2 is a flowchart for transmitting a schedule using an SMS service according to an embodiment of the present invention;

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FIG. 3 is a flowchart for recording a received schedule message according to the embodiment of the present invention;

FIG. 4 illustrates a data format of an SMS message obtained by converting a data format of a schedule according to the embodiment of the present invention;

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FIGS. 5A to 5E illustrate screens for transmitting a schedule recorded in a mobile terminal and recording a received schedule message according to the embodiment of the present invention;

[DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT]

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[OBJECT OF THE INVENTION]**[RELATED FIELD AND RELATED ART OF THE INVENTION]**

The present invention relates generally to a user interface for a mobile terminal having a schedule function, and in particular, to a method for managing schedules.

Commonly, a user always carries a mobile terminal with him or her, and frequently uses an electronic diary function, i.e., a schedule management function, among additional functions of the mobile terminal. In such a schedule management function, if a user selects a menu and then sets a date and a time of a schedule and an alert method, a mobile terminal

raises an alert at the set time of the schedule in the alert method set by the user, and displays the recorded schedule contents for the user. In this way, the user can conveniently be notified of set schedule events.

- 5 Such a schedule function is chiefly useful for recording, as a schedule, the contents that the user desires to memorize, such as friends or parents' birthdays or various anniversaries, and reminding the user of such information that the user may otherwise forget. Among the contents that the user desires to record as a schedule, such schedules as festive days, election
10 days, team dining, team meetings, friendship meetings, etc. are applied in common to the persons belonging to a particular group. Conventionally, in the case where one group has a common schedule, constituent members of the group must individually record the schedule in their own mobile terminals, even though the schedule is common to them.

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[SUBSTANTIAL MATTER OF THE INVENTION]

- As described above, conventionally, users must annoyingly individually input even the common schedule in their own mobile terminals.
20 In order to solve such annoyance, a method for recording the contents of a common schedule in a convenient way is required.

- It is, therefore, an object of the present invention to provide a method for transmitting a common schedule message to a plurality of users' mobile terminals using an SMS service and enabling mobile terminals
25 receiving the schedule message to record the received schedule message as a schedule.

[CONSTRUCTION AND OPERATION OF THE INVENTION]

- 30 To achieve the above object, there is provided a schedule transmission method comprising the steps of: determining whether a schedule transmission input for transmitting a schedule recorded in the mobile terminal to another mobile terminal is selected by a user; and if the schedule transmission input is selected, converting a data format of the
35 schedule into a data format of a schedule-recordable SMS message and transmitting the schedule-recordable SMS message to said another mobile terminal.

To achieve the above object, there is provided a schedule recording method comprising the steps of: upon receiving an SMS message, determining whether the received SMS message is a common SMS message or a schedule-recordable message; if the received SMS message is a schedule-recordable message, determining whether a schedule recording key is input; and if the schedule recording key is input, converting a data format of the received SMS message into a format of data recordable in a scheduler, and recording the converted data in the scheduler.

Preferred embodiment of the present invention will now be described in detail with reference to the annexed drawings. In the following description, a detailed description of known functions and configurations incorporated herein has been omitted for conciseness.

FIG. 1 is a block diagram of a mobile terminal to which the present invention is applied. In FIG. 1, a controller 100 handles and controls a telephone call and message or data communication. In addition to ordinary functions, the controller 100 has a function of transmitting a schedule message using an SMS service and recording a received schedule message in a scheduler according to the present invention. A radio frequency (RF) module 102 is controlled by the controller 100. If a radio signal is received over a radio channel via an antenna ANT, the RF module 102 down-converts the received radio signal, distinguishes its data type, and provides the resultant data to the controller 100. The data provided from the RF module 102 to the controller 100 is text data, or a paging signal and a signaling signal received over a paging channel. In addition, data provided to an audio processor 110 is audio data received when a voice call is set up. Further, the RF module 102 up-converts data received from the controller 100 and coded audio data received from the audio processor 110 into a radio signal, and transmits the radio signal via the antenna ANT. A memory 104 stores a program performed in the controller 100, and temporarily stores data processed by the program. In addition, the memory 104 stores a received SMS message and a telephone number table. The memory 104 is comprised of a ROM (Read Only Memory) for storing an operation program, an electrically erasable and programmable ROM (EEPROM), and a RAM (Random Access Memory). A key input section 106 has a plurality

of alphanumeric keys and function keys, and provides key data generated by key manipulation to the controller 100. A display 108 displays various states of the mobile terminal under the control of the controller 100. The audio processor 110 is generally comprised of a vocoder, and controlled by
 5 the controller 100. The audio processor 110 decodes coded audio data received from the RF module 102, converts the decoded audio data into an electric audio signal, and outputs the electric audio signal to a speaker SPK. The speaker SPK then converts the received electric audio signal into audible sound. In addition, the audio processor 110 encodes an electric
 10 audio signal received from a microphone MIC, and provides the coded electric audio signal to the RF module 102.

FIG. 2 is a flowchart for transmitting a schedule using an SMS message according to an embodiment of the present invention. With
 15 reference to FIG. 2, a description will now be made of an operation of transmitting a schedule stored in a mobile terminal to other mobile terminals according to the present invention.

When a mobile terminal is powered on, a controller 100 holds an
 20 idle state in step 200, and then determines in step 202 whether a Schedule Management menu is selected. The Schedule Management menu is generally selected by a user of the mobile terminal to record a schedule or to view a recorded schedule. A display screen for the "Schedule Management" menu is illustrated in FIG. 5A by way of example.

25 If the Schedule Management menu is selected in step 202, the controller 100 proceeds to step 204. In step 204, the controller 100 determines whether a Schedule View key is input. If a Schedule View key is input, the controller 100 proceeds to step 206 where it displays a
 30 Schedule View screen. A display screen for the "Schedule View" menu is illustrated in FIG. 5B by way of example. If "1. Team Meeting" is selected from a plurality of schedules shown in FIG. 5B, a screen of FIG. 5C is displayed. In FIG. 5C, a date and a time of the team meeting and a schedule alert time are displayed as the contents of a schedule #1. Further, FIG. 5C
 35 illustrates a menu for transmitting the schedule #1 to a plurality of mobile terminals.

If a user desires to transmit a schedule for the team meeting to all team members in the screen of FIG. 5C, the user will select "3. Transmission" through a key input section 106. Then, the controller 100 determines in step 208 whether a Schedule Transmission key is input through the key input section 106. If a Schedule Transmission key is input, the controller 100 determines in step 212 whether a unique number of a recipient to which the schedule is to be transmitted is input by the user. FIG. 5D illustrates a screen for inputting unique numbers of recipients to which the schedule is to be transmitted.

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If it is determined in step 204 that another function key rather than the Schedule View key is input, the controller 100 performs an operation corresponding thereto in step 210.

15 If it is determined in step 212 that inputting unique numbers of recipients to which the schedule is to be transmitted has been completed, the controller 100 proceeds to step 214 where it converts a data format of the schedule into a data format of an SMS message and then repeatedly transmits a schedule message as many times as the number of the recipients, 20 unique numbers of whom were input by the user. Here, the "schedule message" refers to a message obtained by converting a schedule data format into an SMS data format in order to transmit a schedule.

25 The present invention can transmit the contents of a schedule being common to a plurality of users in the form of an SMS message by converting schedule data format into an SMS data format in the above-stated manner.

FIG. 4 illustrates a schedule data format converted into an SMS data 30 format. With reference to FIG. 4, a detailed description will now be made of a data format for transmitting a schedule using an SMS service. ID (Identifier) 400 distinguishes whether a currently transmitted SMS message is a common SMS message or a schedule message for schedule recording. NUM (Number) 402 indicates the numbers for the recipients to which the user desires to transmit a schedule message. That is, NUM 402 is a field 35 that also includes the number of the recipients' numbers input by the user in step 212 of FIG. 2, MEMO_LEN (Memo_Length) 404 indicates a length of

the schedule contents, MEMO 406 indicates the schedule contents, and TIME 408 is a field having information on alert date and time of the schedule desired to be recorded. In addition, PARAMETER 410 is a field indicating use and type of an alert tone. In the present invention, the
 5 controller 100 repeatedly transmits the fields 404, 406, 408 and 410 to corresponding reception mobile terminals as many times as NUM 402 in the converted SMS data format, i.e., as many times as the number of recipients, in order to transmit schedule data.

10 In transmitting the schedule data, a service provider is able to transmit lunar festive days, election days, etc. to its subscribers along with SMS data free of charge. In addition, a general user transmits a schedule, such as the meeting schedule recorded in FIG. 5C, to other users.

15 Now, a control flow for recording a schedule message in a mobile terminal that has received the schedule message will be described with reference to FIG. 3. It will be assumed herein that the mobile terminal receiving the schedule message is similar to the mobile terminal illustrated in FIG. 1.

20 If the mobile terminal is powered on, the controller 100 holds an idle state in step 300, and then determines in step 302 whether a message has been received. If a message has been received, the controller 100 determines in step 303 whether the received message is a general SMS
 25 message or a schedule-recordable message. However, if it is determined in step 302 that no message has been received, the controller 100 returns to step 300 and holds the idle state.

If it is determined in step 303 that the received message is a
 30 schedule-recordable message, the controller 100 proceeds to step 304 where it displays the received message on the display 108. On the contrary, if it is determined in step 303 that the received message is a general message, the controller 100 proceeds to step 305 where it performs a general message reception mode.

35 FIG. 5E illustrates a screen on which the message received in step 304 is displayed, and the screen also displays "Save," "Delete," "Schedule

Recording,” and “Response” menus. At this point, if it is determined in step 306 that a Save key for storing the received schedule message is input, the controller 100 proceeds to step 314 where it stores the schedule message in a message area of the memory 104. If it is determined in step 308 that a
5 Delete key for deleting the schedule message is input, the controller 100 proceeds to step 316 where it deletes the schedule message. If it is determined in step 310 that a Schedule Recording key for recording the schedule message as a schedule is input, the controller 100 proceeds to step 312 where it converts the contents of the schedule message in the data
10 format of FIG. 4 into a recordable data format and then records the converted data in the scheduler.

As described above, according to the present invention, a plurality of mobile terminals that have received a schedule message for schedule
15 recording can directly record the received schedule message in their scheduler.

While the preferred embodiment of the present invention has been illustrated and described, it will be understood by those skilled in the art
20 that various changes and modifications may be made, and equivalents may be substituted for elements thereof without departing from the true scope of the present invention. For example, although the present invention has been described with reference to the case where one schedule is transmitted to a plurality of mobile terminals and then recorded therein, a plurality of
25 schedules can also be transmitted to a plurality of mobile terminals at once. Therefore, it is intended that the present invention not be limited to the particular embodiment disclosed as the best mode contemplated for carrying out the present invention; instead, it is intended that the present invention include all embodiments falling within the scope of the appended
30 claims.

[EFFECTS OF THE INVENTION]

As described above, in the present invention, when a plurality of
35 users have a common schedule, one user transmits a recorded schedule to the other users' mobile terminals using an SMS service, and the mobile terminals receiving the transmitted schedule can directly store the schedule

message in a scheduler of the mobile terminals. Therefore, when one group has a schedule having common contents, each member of the group does not need to separately input the schedule, contributing to the convenience of the users in schedule recording. In addition, since a schedule is
5 transmitted with its alert function being set, a mobile terminal's user receiving the schedule can protect schedule information by performing a function of generating an alert tone by itself at a predetermined time through only a simple checking process and notifying the contents.

WHAT IS CLAIMED IS:

1. A schedule transmission method in a mobile terminal having a short message service (SMS) function and a schedule function, the method comprising the steps of:
 - determining whether a schedule transmission input for transmitting a schedule recorded in the mobile terminal to an other mobile terminal is selected by a user; and
 - if the schedule transmission input is selected, converting a data format of the schedule into a data format of a schedule-recordable SMS message and transmitting the schedule-recordable SMS message to said other mobile terminal.
2. The schedule transmission method of claim 1, wherein the converting step further comprises repeatedly transmitting the converted SMS message to a plurality of other mobile terminals when transmitting the schedule-recordable SMS message to the other mobile terminal.
3. The schedule transmission method of claim 1, wherein the data format of the schedule-recordable SMS message obtained by converting the data format of the schedule comprises parameters indicating an identifier for distinguishing whether a corresponding message is a common SMS message or a schedule-recordable SMS message, the number of recipients to which the schedule is to be transmitted, a length of the schedule contents, alert date and time information of the schedule to be recorded, use of an alert tone for the schedule, and a type of the alert tone.
4. A schedule recording method in a mobile terminal having a short message service (SMS) message reception function and a schedule function, the method comprising the steps of:
 - upon receiving an SMS message, determining whether the received SMS message is a common SMS message or a schedule-recordable SMS message;
 - if the received SMS message is a schedule-recordable SMS message, determining whether a schedule recording key is input; and
 - if the schedule recording key is input, converting a data format of the received SMS message into a format recordable in a scheduler, and

recording the converted data in the scheduler.

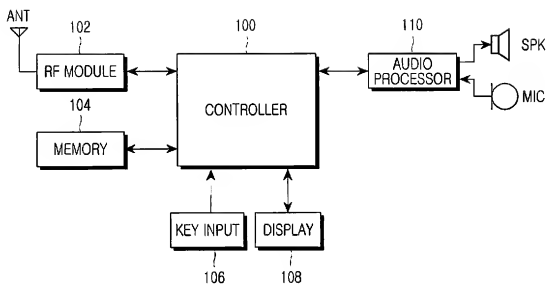


FIG.1

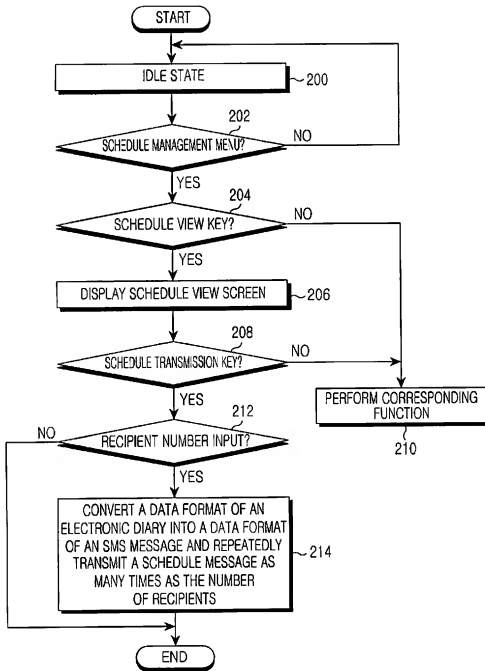


FIG. 2

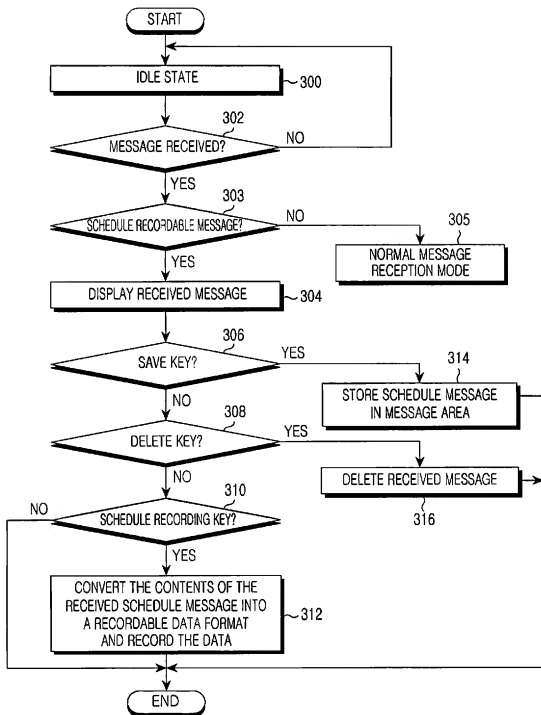


FIG.3

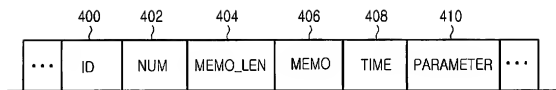


FIG.4

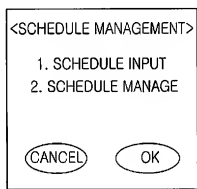


FIG.5A

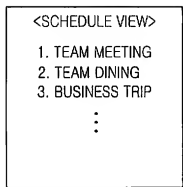


FIG.5B

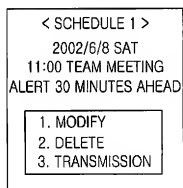


FIG.5C

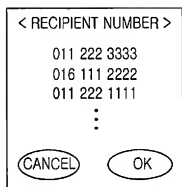


FIG. 5D

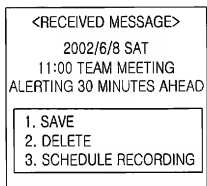


FIG. 5E